The Tsuruga International Energy Forum explored international interest in the restart of the Monju demonstration reactor, which started up in 1994.

INL leaders address Japanese nuclear energy forum

by Ralph Bennett, *INL director of National and Regional Partnerships*

Idaho National Laboratory Director John Grossenbacher was among officials who recently attended a Japanese forum to explore international interest in restarting a fast-spectrum nuclear reactor. He explained the growing importance of nuclear energy at the forum, which attracted officials from France, Russia, China, Korea and India.

"Recent international forecasts indicate that about 200 new nuclear plants will be brought online by 2030," Grossenbacher told the forum. "We believe that about 40 of them could potentially be built in the United States."

INL Lab Director John Grossenbacher addresses the Tsuruga International Energy Forum.

Grossenbacher explained that this amount of nuclear energy — along with strong advances in conservation and efficiency, renewable energy, advanced coal technology with carbon capture and sequestration, plug-in hybrid electric vehicles and distributed energy generation — could reverse the growing CO2 emissions in the United States.

The Tsuruga International Energy Forum was held near the site of the Monju fast breeder reactor in Fukui prefecture, near the town of Tsuruga, Japan and explored international interest in the restart of the demonstration reactor, which started up in 1994.

The reactor was shut down in 1995 after the failure of a thermowell tube in the secondary circuit piping caused a small sodium leak and fire. The reactor sat idle for 11 years, but the Japanese Atomic Energy Association maintained its viability. After the governor of Fukui formally approved preparations to restart the reactor two years ago, refurbishment has moved quickly ant is near completion. The reactor is expected to restart this fall with upgraded leak-detection systems.

In remarks at the forum, Fukui Prefecture Vice Governor Nobuaki Asahi noted, "Fukui, with various nuclear reactors including Monju, expects to be a world-class nuclear development base. It is significant that we have a lot of leading experts at this forum to discuss efforts on energy and environment."

INL Deputy Associate Laboratory Director Kathy McCarthy addressing the forum.

INL Deputy Associate Laboratory Director Kathy McCarthy also attended the forum and outlined U.S. expectations for the restart of Monju.

"Monju will be a key facility for demonstrating the technical feasibility of recycling minor actinides in a fast-spectrum reactor," she told the audience of about 300 at Tsuruga's Wakasa Wan Energy Research Center. She also described plans for a Global Actinide Cycle International Demonstration (GACID) by Japan, France and the United States. That effort is part of the Generation IV International Forum collaborations to research and develop a sodium fast reactor.

Japan's domestic resources produce only 4 percent of the energy it consumes. The country is reliant on nuclear energy to meet about 40 percent of its electricity needs and is planning to deploy fast breeder reactors by about mid-century to greatly extend the amount of energy it can recover from uranium.

Japanese officials from the Ministries of Education, Culture, Sports, Science and Technology (MEXT) and Economy, Trade and Industry (METI) also attended to support the event. Deputy Director General of MEXT Takeshi Furutani explained that, "MEXT is promoting international cooperation and partnership with universities. We are aiming at Monju restart with safety and assurance."

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